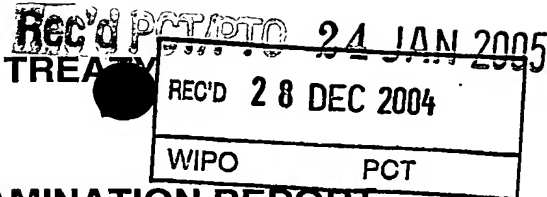




INTERNATIONAL PRELIMINARY EXAMINATION REPORT  
(PCT Article 36 and Rule 70)



Applicant's or agent's file reference 0000053770	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/EP 03/08114	International filing date (day/month/year) 24.07.2003	Priority date (day/month/year) 24.07.2002
International Patent Classification (IPC) or both national classification and IPC A01N43/80		
Applicant BASF AKTIENGESELLSCHAFT et al.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 6 sheets, including this cover sheet.  
  
☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).  
  
 These annexes consist of a total of sheets.

3. This report contains indications relating to the following items:
  - I ☒ Basis of the opinion
  - II ☐ Priority
  - III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
  - IV ☒ Lack of unity of invention
  - V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
  - VI ☐ Certain documents cited
  - VII ☐ Certain defects in the international application
  - VIII ☐ Certain observations on the international application

Date of submission of the demand  19.12.2003	Date of completion of this report  28.12.2004
Name and mailing address of the international preliminary examining authority:   European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016	Authorized Officer  Fort, M  Telephone No. +31 70 340-4123  

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/EP 03/08114

**I. Basis of the report**

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17):*

**Description, Pages**

1-51 as originally filed

**Claims, Numbers**

1-35 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).  
☐ the language of publication of the international application (under Rule 48.3(b)).  
☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.  
☐ filed together with the international application in computer readable form.  
☐ furnished subsequently to this Authority in written form.  
☐ furnished subsequently to this Authority in computer readable form.  
☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.  
☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:  
☐ the claims, Nos.:  
☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

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**IV. Lack of unity of invention**

1. In response to the invitation to restrict or pay additional fees, the applicant has:

- ☐ restricted the claims.
- ☒ paid additional fees.
- ☐ paid additional fees under protest.
- ☐ neither restricted nor paid additional fees.

2. ☐ This Authority found that the requirement of unity of invention is not complied with and chose, according to Rule 68.1, not to invite the applicant to restrict or pay additional fees.

3. This Authority considers that the requirement of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is

- ☐ complied with.
- ☒ not complied with for the following reasons:

**see separate sheet**

4. Consequently, the following parts of the international application were the subject of international preliminary examination in establishing this report:

- ☒ all parts.
- ☐ the parts relating to claims Nos. .

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Yes: Claims	9-11, 14-29
	No: Claims	1-8, 12-13, 30-35
Inventive step (IS)	Yes: Claims	
	No: Claims	1-35
Industrial applicability (IA)	Yes: Claims	1-35
	No: Claims	

2. Citations and explanations

**see separate sheet**

**Re Item IV**

**Lack of unity of invention**

The International Examining Authority (IEA) considers the present application to consist of multiple subject-matter as defined hereafter:

**Subject I (claims 1-7 (partially), 8-11, 14-35 (partially))**

A synergistic herbicidal mixture comprising at least one 3-heterocyclyl-substituted benzoyl derivative of the formula I and at least the compound of the formula IIa

**Subject II (claims 1-7 (partially), 12-13, 14-35 (partially))**

A synergistic herbicidal mixture comprising at least one 3-heterocyclyl-substituted benzoyl derivative of the formula I and at least the compound of the formula IIb

The common technical feature linking the 2 inventions listed in the invitation to pay additional fees is that they all deal with synergistic herbicidal mixtures comprising a 3-heterocyclyl-substituted benzoyl derivative of the formula I together with a further herbicide, the second herbicide being a heterocyclic compound. This feature linking together the 2 inventions is known since synergistic herbicidal compositions comprising a compound of formula (I) together with a triazolpyrimidine sulfoanilide such as florasulam, flumetsulam or metosulam have been used in D1 (D1= Wo99/65314) (see D1, table 18). Therefore this feature is not a special technical feature in the sense of Rule 13(2) PCT. Since the chemical structures of the synergists of formula (IIa) and (IIb) are widely different, no other technical feature common to the two inventions listed above can be distinguished, which would possibly fulfil this requirement. Therefore there is no single inventive concept underlying the two inventions and the present application lacks unity.

Since the applicant has paid one additional fee in response to the invitation to pay additional fees, the two subjects identified above were the subject of international preliminary examination.

**Re Item V**

**Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

## **Subject I**

D1 discloses synergistic herbicidal mixtures containing a 3-heterocyclic-substituted benzoyl derivative of the formula (I) and a triazolpyrimidine sulfonanilide such as florasulam, flumetsulam or metasulam (see D1, tables 2 and 18). Compounds Ia.3 and Ia.33 are particularly preferred (see D1, p.24 and examples). D1 is novelty destroying for the subject-matter of claims 1-8, 30-35 (Article 33 (2) PCT).

Given the teaching of D1, the problem underlying the present invention may be seen as providing alternative synergistic herbicidal mixtures containing a 3-heterocyclic-substituted benzoyl derivative of the formula (I).

Since a synergistic effect has been demonstrated in D1 with a mixture of Ia.33 and metosulam, the use of a mixture containing Ia.33 and flumetsulam instead of metosulam as sulfonanilide compound (claim 9) cannot be considered as being inventive (Article 33(3) PCT).

As to the tertiary (claims 10-11, 14-26) or quaternary mixtures (claims 27-29), they cannot be considered as being inventive either since the synergistic herbicidal effect obtained by combining a compound of formula (I) with clopyralid, diflufenzopyr, a chloroacetanilide, or a triazine such as atrazine is known from D1 (see D1, tables 2, 38-51, 66-68) (Article 33(3) PCT).

The subject-matter of claims 1-11 and 14-35 is considered to be industrially applicable and the present application is therefore considered to satisfy the criterion set forth in Article 33(4) PCT.

## **Subject II**

D1 discloses synergistic herbicidal mixtures containing a 3-heterocyclic-substituted benzoyl derivative of the formula (I) (preferably Ia.3 or Ia.33) and an auxin herbicide such as clopyralid (see D1, table 2). D1 is novelty destroying for the subject-matter of claims 1-7, 12-13 and 30-35 (Article 33(2) PCT).

Given the teaching of D1, the problem underlying the present invention may be seen as providing alternative synergistic herbicidal mixtures containing a 3-heterocyclic-substituted benzoyl derivative of the formula (I).

The tertiary mixtures (claims 14-26) or quaternary mixtures (claims 27-29) cannot be

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considered as being inventive since the synergistic herbicidal effect obtained by combining a compound of formula (I) with a triazolpyrimidine sulfonanilide such as florasulam, flumetsulam or metsulam or with diflufenzopyr, a chloroacetanilide, or a triazine such as atrazine is known from D1 (see D1, tables 2, 38-51, 66-68) (Article 33(3) PCT).

The subject-matter of claims 1-7 and 12-35 is considered to be industrially applicable and the present application is therefore considered to satisfy the criterion set forth in Article 33(4) PCT.